

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Honorable Commissioner for Patents: Please record the attached original document(s) or copy(ies) thereof.

1. Name of Conveying Party(ies):

Kirk Emil APT

James Casey LIPPMEIER

F.C. Thomas ALLNUTT

David J. KYLE

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and Address of Party(ies) receiving an interest (assignee(s)):

Name: Martek Biosciences Corporation

Name:

Address: 6480 Dobbin Road

Address:

Columbia, Maryland 21045

Country: U.S.A.

Country:

Additional name(s) and address(es) attached? Yes No

3. Nature of Conveyance:

Assignment Merger Change of Name
 Verified Translation Security Agreement Other: _____

Execution Date: July 2, 2001 and August 2, 2001

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date(s) of the application is: _____

A. Patent Application No(s):

B. Patent No(s):

1

Others on additional sheet(s) attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Laurence H. Posorske
 Intellectual Property Department
 Brobeck, Phleger & Harrison LLP
 1333 H Street, N.W.
 Suite 800
 Washington, DC 20005
 (202) 220-6000 (telephone)
 (202) 220-5200 (facsimile)

6. Total number of applications and patents involved:

Application(s): 1
 + Patent(s): _____
 = Total: 1

7. Total Fee (37 C.F.R. § 3.41) \$ 40.00

Enclosed
 Authorized to be charged to Deposit Account

8. Deposit Account No.: 50-1640

(Duplicate copy of this sheet attached)

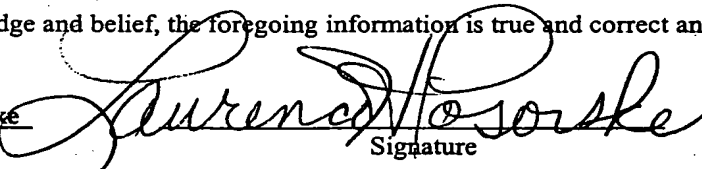
Charge any underpayment or credit any overpayment to above Deposit Account

DO NOT USE THIS SPACE

9. Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Laurence H. Posorske
 Name of Person Signing


 Signature

August 15, 2001
 Date

Total number of pages including cover sheet, attachments, and document:

5

ASSIGNMENT

WHEREAS, WE, Kirk Emil APT, residing at 6312 Early Glow Court, Columbia, Maryland 21797; F.C. Thomas ALLNUTT, residing at 95 Bentley Lane, Port Deposit, Maryland 21904; David J. KYLE, residing at 1801 Narbeth Road, Catonsville, Maryland 21228; and James Casey LIPPMEIER, residing at 311 A Street, N.E., Apt. 3, Washington, DC 20002, have invented certain new and useful improvements in and to the subject matter of:

TROPHIC CONVERSION OF OBLIGATE PHOTOTROPHIC ALGAE THROUGH METABOLIC ENGINEERING

described in an application for United States Letters Patent filed on April 23, 2001, and accorded Application No. 09/839,536;

AND, WHEREAS, MARTEK BIOSCIENCES CORPORATION, a corporation organized under the laws of the State of Maryland, having a place of business located at 6480 Dobbin Road, Columbia, Maryland 21045 (hereinafter "ASSIGNEE"), is desirous of acquiring certain rights to the improvements and under the application;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration, receipt of which is hereby acknowledged, we do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said improvements, said United States application, any other United States applications, including provisional, divisional, renewal, substitute, continuation, reexamination and reissue applications, based in whole or in part on said United States application or in whole or in part on said improvements, any foreign applications, including international and regional applications, based in whole or in part on any of the aforesaid United States applications or in whole or in part on said improvements, and in and to any and all letters patent, including extensions thereof, of any country which have been or may be granted on any of the aforesaid applications or on said improvements or any parts thereof;

AND WE hereby authorize and request our agents, Brobeck, Phleger & Harrison LLP, whose address is 1333 H Street, N.W., Suite 800, Washington, DC 20005, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.


AND WE hereby agree for ourselves and our heirs, executors and administrators to execute without further consideration any further documents and instruments which may be necessary, lawful and proper in the prosecution of said above-referenced application or in the preparation or prosecution of any continuing, substitute, divisional, renewal, reexamination or reissue application or in any amendments, extensions or interference proceedings, or other applications for patents of any region or country, that may be necessary to secure to ASSIGNEE its interest and title in and to said improvements or any parts thereof, and in and to said several patents or any of them;

AND WE hereby covenant for ourselves and our legal representatives, and agree with said ASSIGNEE, its successors and assigns, that we have granted no right or license to make, use, sell or offer to sell said improvements, to anyone except said ASSIGNEE, that prior to the execution of this deed, our right, title and interest in said improvements had not been otherwise encumbered, and that we have not and will not execute any instrument in conflict therewith;

AND WE do hereby authorize and request the United States Commissioner for Patents to issue any and all letters patent which may be granted upon said United States applications, or upon said improvements or any parts thereof when granted, to said ASSIGNEE.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

8/2/01
Date


Kirk Emil APT

County of _____)
State of _____) ss:

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

(SEAL)

Notary Public

My Commission Expires _____

BROBECK, PHLEGER & HARRISON LLP
INTELLECTUAL PROPERTY DEPARTMENT
1333 H STREET, N.W.
SUITE 800
WASHINGTON, D.C. 20005
(202) 220-6000 (TELEPHONE)
(202) 220-5200 (FACSIMILE)

2 Aug 2001
Date

[Signature]
F.C. Thomas ALLNUTT

County of _____)
) ss:
State of _____)

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

(SEAL)

Notary Public
My Commission Expires _____

Aug 2 2001
Date

[Signature]
David J. KYLE

County of _____)
) ss:
State of _____)

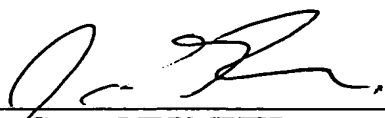
On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

(SEAL)

Notary Public
My Commission Expires _____

BROBECK, PHLEGER & HARRISON LLP
INTELLECTUAL PROPERTY DEPARTMENT
1333 H STREET, N.W.
SUITE 800
WASHINGTON, D.C. 20005
(202) 220-6000 (TELEPHONE)
(202) 220-5200 (FACSIMILE)

7/2/01
Date


James Casey LIPPMEIER

County of _____)
State of _____) ss:

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

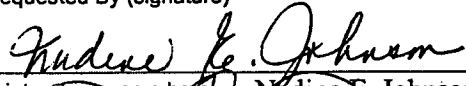
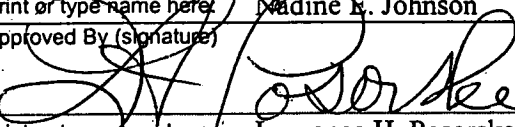
(SEAL)

Notary Public

My Commission Expires _____

BROBECK, PHLEGER & HARRISON LLP
INTELLECTUAL PROPERTY DEPARTMENT
1333 H STREET, N.W.
SUITE 800
WASHINGTON, D.C. 20005
(202) 220-6000 (TELEPHONE)
(202) 220-5200 (FACSIMILE)

DISBURSEMENT AUTHORIZATION FORM

REQUEST FOR				
<input checked="" type="checkbox"/> Regular Check		<input type="checkbox"/> No-Amount Check (good for up to \$500)		<input type="checkbox"/> Wire Transfer
<input type="checkbox"/> Cash - Sign:			<input type="checkbox"/> Other:	
Payable To Commissioner of Patents and Trademarks				Amount \$ 40.00
				Date Needed August 15, 2001
Return To (Checks will be mailed unless otherwise instructed) Sabrina Loftis			Room Number 925	Ext. 5247
CLIENT CHARGES				
CMID Number 31676.0212	Client/Matter Name Martek Biosciences		Disbursement Code	Amount \$ 40.00
Total Amount				\$ 40.00
FIRM CHARGES				
Office Click to Select Office	Department	Account	Project Code* 0000	Amount \$
Click to Select Office			0000	
Click to Select Office			0000	
*Project Code is usually 0000, unless your department uses Project Codes.			Total Amount	\$ 0.00
DESCRIPTION OF CHARGE				
U.S. Patent and Trademark Office charges for Assignment recordation.				
Requested By (signature) 			Attorney Number 100135	Date August 15, 2001
Print or type name here Nadine E. Johnson				
Approved By (signature) 			Attorney Number 100054	Date August 15, 2001
Print or type name here Laurence H. Posorske				
FOR ACCOUNTING USE ONLY				
Vendor Number				Entered by

08-21-2001

SHEET

To the Honorable Commissioner for Pat

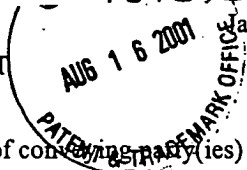
ument(s) or copy(ies) thereof.

1. Name of Conveying Party(ies):

Kirk Emil APT
F.C. Thomas ALLNUTT
David J. KYLE

101818093

James Casey LIPPMEIER



08/16/01

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and Address of Party(ies) receiving an interest (assignee(s)):

Name: Martek Biosciences Corporation
Address: 6480 Dobbin Road
Columbia, Maryland 21045

Name:
Address:

Country: U.S.A.

Country:

Additional name(s) and address(es) attached? Yes No

3. Nature of Conveyance:

- Assignment
- Verified Translation
- Merger
- Security Agreement
- Change of Name
- Other: _____

Execution Date: July 2, 2001 and August 2, 2001

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date(s) of the application is: _____

- A. Patent Application No(s): 1
- B. Patent No(s):

Others on additional sheet(s) attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Laurence H. Posorske
Intellectual Property Department
Brobeck, Phleger & Harrison LLP
1333 H Street, N.W.
Suite 800
Washington, DC 20005
(202) 220-6000 (telephone)
(202) 220-5200 (facsimile)

6. Total number of applications and patents involved:

Application(s):	1
+ Patent(s):	
= Total:	1

7. Total Fee (37 C.F.R. § 3.41) \$ 40.00

- Enclosed
- Authorized to be charged to Deposit Account

8. Deposit Account No.: 50-1640

(Duplicate copy of this sheet attached)

- Charge any underpayment or credit any overpayment to above Deposit Account

DO NOT USE THIS SPACE

9. Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Laurence H. Posorske
Name of Person Signing

Signature

August 15, 2001
Date

Total number of pages including cover sheet, attachments, and document:

5

08/20/2001 LMUELLER 00000259 09839536

01 FC:581

40.00 OP

ASSIGNMENT

WHEREAS, WE, Kirk Emil APT, residing at 6312 Early Glow Court, Columbia, Maryland 21797; F.C. Thomas ALLNUTT, residing at 95 Bentley Lane, Port Deposit, Maryland 21904; David J. KYLE, residing at 1801 Narbeth Road, Catonsville, Maryland 21228; and James Casey LIPMEIER, residing at 311 A Street, N.E., Apt. 3, Washington, DC 20002, have invented certain new and useful improvements in and to the subject matter of:

TROPHIC CONVERSION OF OBLIGATE PHOTOTROPHIC ALGAE THROUGH METABOLIC ENGINEERING

described in an application for United States Letters Patent filed on April 23, 2001, and accorded Application No. 09/839,536;

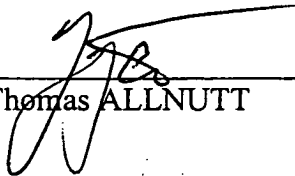
AND, WHEREAS, MARTEK BIOSCIENCES CORPORATION, a corporation organized under the laws of the State of Maryland, having a place of business located at 6480 Dobbin Road, Columbia, Maryland 21045 (hereinafter "ASSIGNEE"), is desirous of acquiring certain rights to the improvements and under the application;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration, receipt of which is hereby acknowledged, we do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said improvements, said United States application, any other United States applications, including provisional, divisional, renewal, substitute, continuation, reexamination and reissue applications, based in whole or in part on said United States application or in whole or in part on said improvements, any foreign applications, including international and regional applications, based in whole or in part on any of the aforesaid United States applications or in whole or in part on said improvements, and in and to any and all letters patent, including extensions thereof, of any country which have been or may be granted on any of the aforesaid applications or on said improvements or any parts thereof;

AND WE hereby authorize and request our agents, Brobeck, Phleger & Harrison LLP, whose address is 1333 H Street, N.W., Suite 800, Washington, DC 20005, to insert hereon any identification necessary or desirable for recordation of this document, including the filing date and application number of said application when known.

AND WE hereby agree for ourselves and our heirs, executors and administrators to execute without further consideration any further documents and instruments which may be necessary, lawful and proper in the prosecution of said above-referenced application or in the preparation or prosecution of any continuing, substitute, divisional, renewal, reexamination or reissue application or in any amendments, extensions or interference proceedings, or other applications for patents of any region or country, that may be necessary to secure to ASSIGNEE its interest and title in and to said improvements or any parts thereof, and in and to said several patents or any of them;

2 Aug 2001
Date


F.C. Thomas ALLNUTT

County of _____)
State of _____)

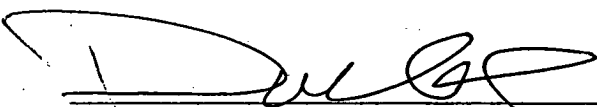
ss:

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

(SEAL)

Notary Public
My Commission Expires _____

Aug 2 2001
Date


David J. KYLE

County of _____)
State of _____)

ss:

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

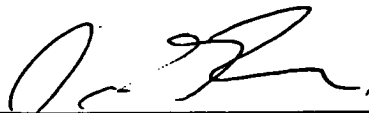
(SEAL)

Notary Public
My Commission Expires _____

BROBECK, PHLEGER & HARRISON LLP
INTELLECTUAL PROPERTY DEPARTMENT
1333 H STREET, N.W.
SUITE 800
WASHINGTON, D.C. 20005
(202) 220-6000 (TELEPHONE)
(202) 220-5200 (FACSIMILE)

7/2/01

Date



James Casey LIPPMEIER

County of _____)

) ss:

State of _____)

On this _____ day of _____, 2001, before me a Notary Public in and for the County and State aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and acknowledged the same to be of his free act and deed.

Notary Public

(SEAL)

My Commission Expires _____

BROBECK, PHLEGER & HARRISON LLP
INTELLECTUAL PROPERTY DEPARTMENT
1333 H STREET, N.W.
SUITE 800
WASHINGTON, D.C. 20005
(202) 220-6000 (TELEPHONE)
(202) 220-5200 (FACSIMILE)